REMARKS/ARGUMENTS

Applicants appreciate the allowance of claims 11-14 and 31-33 and the indication that claims 6 and 26 would be allowable if rewritten in independent form.

Claims 6 and 26 have been rewritten in independent form including all of the limitations of their respective base claims 1 and 21. There are no intervening claims.

On page 2 of the Official Action, claims 1-5, 7, 10, 15, 18, 20, 21-25, 27, 30, 34, and 41 were rejected under 35 U.S.C. 102(e) as being anticipated by Witte et al., U.S. Patent 7,143,307. In reply, claims 1, 3, 21, and 23 have been amended to more clearly distinguish Witte, and claims 15-20 and 34-41 have been canceled. In addition, new claims 42 and 43 have been added, which are similar to claims 1 and 3 as amended. New claim 42 positively recites the operations of replication and switching user access, and explicitly specifies operating the disaster recovery site without sufficient resources on the disaster recovery site to ensure full user access at the disaster recovery site to the secondary file server.

The amendments to claims 1, 3, 21, 23, and the new claims 42 and 43, explicitly point out that the operation of "determining whether there are sufficient network interfaces and file system mounts at the disaster recovery site for the secondary virtual file server for providing user access at the disaster recovery site" is performed "before switching user access over from the primary file server at the active site to the secondary virtual file server at the disaster recovery site, ..." Support for this limitation and support for the new claims 42 and 43 is found in applicants' FIG. 53 (steps 791, 792, and 794 or 799 performed before the failover of step 795) and in applicants' specification on page 4 lines 1-9, page 97 line 9 to page 99 line 4, page 109 line 2-8, and page 127, lines 2-8. In new claim 42, support for the limitation "operating the

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disaster recovery site without sufficient resources on the disaster recovery site to ensure full user access at the disaster recovery site to the secondary virtual file server" specifically is found in applicants' specification on page 47 lines 14-17 and in steps 791-793, and 796 of FIG. 53. In new claim 42, support for the final step of "switching user access over from the primary file server at the active site to the secondary virtual file server at the disaster recovery site" specifically is found in step 795 of FIG. 53 (perform ... failover of the VDM from the primary site to the secondary site) and in applicants' specification on page 98 lines 8-11 and page 109 lines 3-7.

In short, applicants' claims 1, 21, and 42 are directed to addressing "problems setting up the virtual secondary server in such a way that users can immediately access data in the event of a failure on the primary server. ... Problems with storage resources, network resources, and address conflicts may not become known until an attempted failover from the primary server to the virtual secondary server." (Applicants' specification, page 4, lines 2-4 and 7-9.) These problems are solved by "perform[ing] prevalidation and resource reservation just prior to failover of a VDM, in case the system has been operating without sufficient resources on the secondary side to ensure full user access at the disaster recovery site after failover from the active site to the disaster recovery site" (applicants' specification, page 97, lines 13-17) and also by "perform[ing] prevalidation, resource reservation, and then a configuration change" in response to a configuration change request (applicants' specification, page 97, lines 17-23).

It is respectfully submitted that the amendments to claims 1, 3, 21, 23, and the new claims 43 and 43, clearly distinguish Witte. With respect to applicants' claim 1, for example,

pages 2-3 of the Official Action cite Witte, col. 1, lines 49-60 and col. 7 lines 47-60 and col. 8

lines 19-25.

Witte discloses creating and serving a backup data set on a backup filer located at a

remote site from a primary filer by essentially moving an entire operating environment of a

primary dataset to the backup filer. In the event that the primary filer or primary virtual filer

(vfiler) becomes unavailable, a technique may be implemented as a disaster recovery or data

migration sequence to enable efficient instantiation of a backup vfiler to serve the backup data

set for the client. (See Witte col. 2 lines 49-60.) A vfiler is a logical partitioning of network and

storage resources of the filer to establish an instance of a multi-protocol server. Each vfiler is

maintained and executed entirely independent of other vfilers on the filer. To that end, dedicated

filer resources, such as units of storage and network addresses of network interfaces, may be

arbitrarily grouped and "hard" partitioned to establish security domains within the filer. Yet

common filer resources, such as a storage operating system and a file system, may be shared

among the vfilers. Specifically, each vfiler is allocated a certain amount, i.e., a subset, of

dedicated and distinct units of storage resources, and one or more dedicated and distinct network

addresses. (Witte col. 7 lines 54-66.) Each vfiler is configured to serve ("host") data, such as a

data set, for a user or client. As defined herein, $VF1_P$ is a vfiler running on the primary filer 300_P

and adapted to serve a primary data set 350_P for a client U1, whereas $VF1_B$ is a vfiler, running on

the backup filer 300_B, which is created either on demand or in response to a primary filer failure

to serve a SnapMirror copy ("backup data set 350_B") of the primary data set for the client U1."

(Witte, col. 8, lines 17-25.)

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It is respectfully submitted that neither the problem addressed by the applicants nor their solution as recited in applicants' claims is disclosed or suggested by Witte. In applicants' claims 1, 21, and 42, there exists a secondary virtual file server including a collection of files being replicated from the primary file server to the disaster recovery site. Before switching user access over from the primary file server at the active site to the secondary virtual file server at the disaster recovery site, there is a determination of whether there are sufficient network interfaces and file system mounts at the disaster recovery site for the secondary virtual file server for providing user access at the disaster recovery site. Upon finding that there are sufficient network interfaces and file system mounts at the disaster recovery site, the network interfaces and file system mounts that are needed at the disaster site are reserved for providing user access at the disaster recovery site.

In other words, applicants are not simply claiming the instantiation of a backup vfiler when the primary filer or primary vfiler becomes unavailable. Thus, it is not clear from Witte whether the problem addressed by applicants ever occurred in Witte or was solved by Witte in the fashion as claimed by the applicants; for example, one might assume or not check that there would be sufficient resources for the secondary vfiler before user access is switched over to the disaster recovery site, or one might never operate the disaster recovery site without sufficient resources on the disaster recovery site to ensure full user access at the disaster recovery site to the secondary vfiler.

"For a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference." Diversitech Corp. v. Century Steps, Inc., 7 U.S.P.Q.2d 1315, 1317 (Fed. Cir. 1988), quoted in In re Bond, 910 F.2d 831,15

U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990) (vacating and remanding Board holding of anticipation; the elements must be arranged in the reference as in the claim under review, although this is not an *ipsis verbis* test).

With respect to claims 3, 23, and 43, these claims more clearly distinguish Witte et al. by specifically reciting that the configuration change of the primary file server at the active site is performed before switching user access over from the primary file server at the active site to the secondary virtual file server at the disaster recovery site. In applicants' FIG. 53 and corresponding written description in the applicants' specification, the configuration change of the primary file server at the active site is separate and distinct from the failover of the VDM from the primary site to the secondary site.

With respect to claim 3, for example, page 3 of the Official Action cites Witte, col. 12, lines 23-40. This paragraph of Witte says:

In Step 510, the created backup vfiler $VF1_B$ then "assumes the identity" of the primary vfiler $VF1_P$. As used herein, the term "assumes the identity" means reprogramming a network address, such as an IP address, of a network interface associated with the primary vfiler $VF1_P$ to the backup vfiler $VF1_B$ using, e.g., network configuration information stored on a NIC of the backup filer 300_B or a conventional network address resolution protocol (ARP). Note that the network configuration information is included in the vfiler-encapsulated meta-data (along with the external configuration 415) transferred to the backup filer. In Step 512, in a final steady state, the backup vfiler $VF1_B$ impersonates the primary vfiler $VF1_P$ by serving its client using the backup data set. In essence, $VF1_P$ has moved ("transitioned") from the primary filer 300_p to the backup filer 300_B. This

transition can be undone by following the same steps to essentially move the backup vfiler VF1$_B$ from the backup filer 300$_B$ to the primary filer 300$_P$. The sequence then ends in Step 514.

The Official Action cites this passage for suggesting that the primary network configuration is changed once backup is created. However, applicant's claims 3, 23, and 43 recite "a configuration change of the primary file server at the active site ...", and step 506 of FIG. 5 in Witte indicates that the primary filer becomes unavailable.

In any event, applicants' claims 3, 23, and 43 now clearly point out that the configuration change of interest is <u>before</u> switching user access over from the primary file server at the active site to the secondary virtual file server at the disaster recovery site and therefore should not be construed to cover a configuration change of the system network or the primary file server at the active site that is switching the user access over from the primary file server at the active site to the secondary virtual file server at the disaster recovery site.

On page 8 of the Official Action, claims 8, 9, 16, 17, 19, 28, 29, and 35-40 were rejected under 35 U.S.C. 103(a) as being unpatentable over Witte in view of Olson et al., U.S. 7,069,468 filed June 28, 2002. In reply, claims 16-17, 19, and 35-40 have been canceled. It is respectfully submitted that the dependent claims 8-9 and 28-29 are patentable by virtue of their limitations incorporated by reference under 35 U.S.C. 112, paragraph 4, from their respective base claims 1 and 21 because there is nothing in Olson et al. disclosing or suggesting the limitations of applicants' claims 1 and 21 that are missing from Witte, as discussed above.

In view of the above, it is respectfully submitted that the application is in condition for allowance. Reconsideration and early allowance are earnestly solicited.

Respectfully submitted,

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